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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,485	08/20/2003	Peter J. Skalhunes	50572-28771	7394

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EXAMINER

DAVIS, OCTAVIA L

ART UNIT PAPER NUMBER

2855

DATE MAILED: 02/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/644,485

Applicant(s)

SKALCHUNES, PETER J.

Examiner

Octavia Davis

Art Unit

2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/29/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 17, 18, 20, 27, 29, 30 and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by Koenig.

Regarding claims 17, 18, 27 and 32, Koenig discloses a fiber optic detection system and method comprising a light source E4 operable to generate a light beam, the light source constituting an emitter that emits the light beam and that includes an emitter lens, a first fiber optic cable 402 including proximate and distal ends, the proximate end of the first cable in communication with the light source and the distal end of the first cable in communication with the emitter lens (See Page 4, Sections 0037 and 0038 and Page 5, Section 0043, See Fig. 4) and a receiver R4 comprising a second fiber optic cable 406 comprising proximate and distal ends, the proximate end of the second fiber optic cable in communication with a receiver and the distal end of the second fiber optic cable in communication with the sensor, the receiving lens disposed in facing opposition to the emitter lens (See Page 4, Sections 0037 and 0038 and Page 5, Section 0043, See Fig. 4).

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Regarding claims 20 and 29, the receiving lens is operable to focus the light beam on a surface of the proximate end of the second fiber optic cable 406.

Regarding claim 30, a processor is in communication with the light source E4 and the sensor, the processor being operable to associate a first value with a quantity of light emitted from the emitter and a second value with a quantity of light received by the receiver.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 – 16, 19, 21 - 26, 28, 31 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koenig in view of Rubel.

Regarding claims 1, 3, 12, 16, 19, 28, 32 and 33, Koenig discloses all of the limitations of these claims except for a thread breakage detection apparatus coupled to a textile sewing machine. However, Rubel discloses a monitor and malfunction predictor for textile machines comprising a thread breakage detection sensing means 20 – 26 coupled to the textile machine (See Col. 4, lines 64 – 67 and Col. 9, lines 15 – 37).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Koenig according to the teachings of Rubel for the purpose of, providing a monitoring and malfunction detector for the thread feed of a textile machine to

determine whether the status of the machine is inconsistent with preset or expected parameters (See Rubel, Col. 5, lines 28 – 32).

Regarding claims 2 and 4, in Koenig, the light source E4 generates modulated light signals that are transmitted through one or more optical cables to one or more optical switch component assemblies that collimate the modulated light signals (See PG. 3, Section 0031).

Regarding claim 5, in Koenig, the receiving means R4 operable to focus the light beam on a surface of the proximate end of the second fiber optic cable 36 (See Page 4, Section 0038).

Regarding claims 6, 21 and 31, Koenig discloses all of the limitations of these claims except for a second processor operable to control the textile sewing apparatus. However, in Rubel, an ECU controls the textile sewing machine (See Col. 5, lines 28 – 37 and Col. 8, lines 14 - 52).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Koenig according to the teachings of Rubel for the purpose of, providing a software system to monitor and control the operation of a large number of machines (See Rubel, Col. 8, lines 58 – 63).

Regarding claims 7, 8, 22 and 23, in Koenig, the processor 414, 416 includes a relay (See Pgs. 4 and 5, Section 0042).

Regarding claims 9 and 24, in Koenig, the first processor 416 is operable to associate a first value with a quantity of light emitted from the emitter and to associate a second value with a quantity of light received by the receiver (See Pg. 4, Sections 0037 and 0038).

Regarding claims 10, 11, 25, 26 and 31, in Koenig, the first processor is operable to compare the first and second values (See Pg. 5, Section 0044).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 13 – 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koenig and Rubel, as applied to claims 1 – 12 and 16 – 33 above, and further in view of Bollen.

Regarding claims 13 – 15, Koenig and Rubel disclose all of the limitations of these claims except for a teaching that the textile sewing apparatus comprises a carpet tufting apparatus comprising a yarn guide plate and a needle bar, the emitter being disposed proximate the yarn guide plate and the needle bar. However, Bollen discloses a device for monitoring threads in textile machine comprising a yarn guide plate 23 and a needle bar 19 and an emitter 17 disposed proximate to the plate and needle bar (See Col. 2, lines 29 – 37, Col. 3, lines 51 - 63 and 16 –21).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Koenig and Rubel according to teachings of Bollen for the purpose of, utilizing a light emitter to direct a light beam that runs in the plane of the threads in the operating position of the needle (See Bollen, Col. 3, lines 22 – 26).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Von Ronai-Horvath et al (4,501,114) disclose an apparatus for controlling passage of material through textile spinning or twisting machine.

Tedesco et al (6,259,517) disclose an optical fiber breakage detection system.

Wueger (4,300,599) discloses a warp detection system.

Rawson (4,602,582) discloses a monitoring looper thread feed monitoring device in a sewing machine.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Octavia Davis whose telephone number is 571-272-2176. The examiner can normally be reached on Mon to Thurs from 9 to 5. The examiner can also be reached on alternate Fridays.

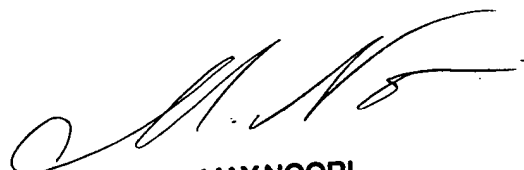
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz, can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



OD/2855

12/19/05



MAX NOORI
PRIMARY EXAMINER